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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,094	12/28/2001	Sunil Palakodati	10541-183	2388

29074 7590 06/27/2003

BRINKS HOFER GILSON & LIONE
P.O. BOX 10395
CHICAGO, IL 60611

EXAMINER

WINNER, TONY H

ART UNIT	PAPER NUMBER
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3611

DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/041,094

Applicant(s)
Palakodati Sunil et al.

Examiner
Tony H. Winner

Art Unit
3611



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 10, 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Apr 10, 2003 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Acknowledgment

1. Receipt of the amendment and formal drawings filed 4/10/03 has been acknowledged and entered. The office is withdrawing the drawing objection because figures 1-3 have been designated as --Prior Art--.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art Figures 1-3 and in view of Whitney.

Prior Art discloses an electric power steering system comprising:

- a. An assist pinion (fig 2) with first and second ends,
- b. First end may engage a rack,
- c. Second end is coupled to the pinion gear,
- d. An electric motor (18) having a rotating output shaft and the shaft is coupled to the pinion gear.

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Prior Art lacks the teaching of a roller pinion gear with plurality of radially projecting teeth.

Whitney discloses a roller pinion gear comprising:

- a. A roller wheel (A2) having plurality of radially projecting teeth (T),
- b. Pin rotatably mounted in and projecting from the periphery,
- c. A pinion shaft (B) coupled to the roller wheel. Whitney teaches the use of roller pinion gear so as to reduce the friction between two meshing gears.

Based on the teaching of Whitney, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify any power transfer devices including the steering gear of the Prior Art to include the roller pinion gear of Whitney so as to reduce the friction between two meshing gears.

With respect to claims 4-5, 9, and 11-12, the Prior Art as modified by Whitney meets all of the claimed limitations.

With respect to claims 6 and 7, Prior Art as modified by Whitney discloses the claimed invention except for the range of the gear ratio. It would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the gear ration between the roller screw and the assist pinion, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

The reasoning of rejection is also applied to claims 7-8, 13-15, and 17.

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With respect to claims 18-19, Prior Art as modified by Whitney meets all of the method claimed limitations.

The method and reasoning of rejection for claims 20-22 is the same as claims 6 and 7 above.

Response to Arguments

3. Applicants' arguments filed 4/10/03 have been fully considered but they are moot in view of new ground of rejection.

Applicants argue that there are no teaching of using roller pinion gear for a power steering device for nearly 100 years. Therefore, it would not have been obvious to modify a power steering device to include the roller pinion gear as taught by Whitney.

The fact that no teaching or patent on this specific combination does not necessarily mean that it is not obvious. It merely means that no one has gotten a patent of this combination. The reason may be that the combination is obvious, and all the prior attempts at a patent are now residing in the Abandoned files. The argument for claims 3-22 are moot in view of the newly apply reference (Prior Art).

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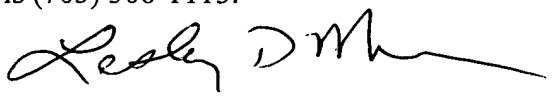
Conclusion

4. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tony Winner whose telephone number is (703) 306-5957. The examiner can normally be reached on Monday-Friday from 9:30 am to 6:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.


TONY WINNER
PATENT EXAMINER

June 21, 2003


LESLEY D. MORRIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600